

Title (en)

Liquid-type transformerless thermal evaporating device.

Title (de)

Transformatorlose Vorrichtung zur thermischen Verdampfung eines flüssigen Stoffes.

Title (fr)

Appareil sans transformateur pour l'évaporation thermique d'un liquide.

Publication

EP 0661907 A3 19951115 (EN)

Application

EP 94308529 A 19941118

Priority

- JP 35061693 A 19931229
- JP 9400240 W 19940217
- JP 28287094 A 19941021

Abstract (en)

[origin: EP0661907A2] A device body is equipped with a heater unit (3) and a thermal evaporating agent (9) is filled in a tank (6), and a leading end of a core (8) for sucking up the thermal evaporating agent which is inserted in the tank (6) is inserted into the heater unit (3). The heater unit (3) is in an annular shape and is incorporated with a transformerless exothermic body (10). The transformerless exothermic body (10) is a positive temperature thermistor and the voltage-current characteristic thereof has a region, over the range of at least 100V to 240V of applied voltage, which satisfies the conditions of $V_x + I_y = a$ (a is constant) in orthogonal coordinates in which a longitudinal axis is a voltage V_x and a lateral axis is a current I_y . Therefore, even though the applied voltages are 100 V and 240 V, the change of consumed current, $P=VI$ is small and there causes no difference in their exothermic temperatures in the range of the applied voltages of 100 V to 240 V. Thus, even though the applied voltage is 100 V or 240 V, there causes no difference in consuming time of the thermal evaporating agent. <IMAGE>

IPC 1-7

H05B 3/14

IPC 8 full level

H05B 3/14 (2006.01)

CPC (source: EP)

H05B 3/141 (2013.01)

Citation (search report)

- [Y] EP 0290159 A2 19881109 - TDK CORP [JP], et al
- [E] EP 0629102 A2 19941214 - OHIZUMI MFG CO LTD [JP]
- [A] US 3975307 A 19760817 - MATSUO YOSHIHIRO, et al
- [A] US 4734560 A 19880329 - BOWEN JOHN G [GB]
- [Y] T.R.N. KUTTY ET AL.: "Varistor properties of n-BaTiO₃ based current limiters.", APPLIED PHYSICS LETTERS, vol. 59, no. 21, 18 November 1991 (1991-11-18), USA, pages 2691 - 2693, XP000265186
- [A] G. MADER ET AL.: "Mechanism of electrical conductivity in semiconducting barium titanate ceramics, part 1.", SIEMENS FORSCHUNGS- UND ENTWICKLUNGS-BERICHT, vol. 16, no. 2, DE, pages 76 - 82, XP001455253

Designated contracting state (EPC)

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